

A New Myrmecophilous Species of *Batraxis* (Coleoptera,
Staphylinidae, Pselaphinae), Associated with
Lasius (*Chthonolasius*) sp. (Hymenoptera, Formicidae,
Formicinae) from Hokkaido, Japan

Munetoshi MARUYAMA

Department of Zoology, National Science Museum, Hyakunin-chô
3–23–1, Shinjuku-ku, Tokyo, 169–0073 Japan

and

Hiroshi SUGAYA

Systematic Entomology, Graduate School of Agriculture,
Hokkaido University, Sapporo-shi, 060–8589 Japan

Abstract A myrmecophilous pselaphine beetle, *Batraxis kawaharai* sp. nov., is described based on the material collected from nests of *Lasius* (*Chthonolasius*) sp./spp. in Hokkaido, Japan. This species is closely similar in general appearance to *Batraxis macedonica* (KARAMAN) but is distinguished from it by some character states indicated in the diagnosis.

Introduction

Only a few myrmecophilous pselaphine species have been reported from Hokkaido, northeastern Japan. In 2000, Mr. Y. KIDA passed over the senior author a specimen of an unusual pselaphine collected by Mr. S. KAWAHARA from a nest of *Lasius* (*Chthonolasius*) sp. in Shari-chô, eastern Hokkaido, which was eventually identified as an undescribed species belonging to the genus *Batraxis* REITTER, 1881 (Goniaceritae, Brachyglutini).

We once tried to collect additional material of this species at the same site, but no beetle has been collected. In 2001, however, we happened to find an additional specimen of this species in a nest of *Chthonolasius* ants in Hakken-zan of Sapporo-shi, Hokkaido.

The genus *Batraxis* is represented by 44 species described mainly from the Oriental Region, and partly from southern Europe and Australia. From Japan, only one species, *B. splendida* NOMURA, 1986, has been known from the Nansei-shotô (the Ryukyu Archipelago). It is often collected from ant nests and considered to be myrmecophilous. All the known species have been recorded from temperate to tropical areas.

Thus, discovery of the new species from Hokkaido, which belongs to subarctic area, seems remarkable.

Although only two male specimens have been available for study, we are going to describe the species herewith with a short bionomical note for attracting attention of colleagues for further collecting.

The technical procedures adopted herein are generally the same as those explained in MARUYAMA *et al.* (2003). The terminology of the foveal system follows CHANDLER (2001).

***Batraxis kawaharai* MARUYAMA et SUGAYA, sp. nov.**

(Figs. 1–6)

Type material. Holotype, ♂, Hakken-zan, Minami-ku, Sapporo-shi, Hokkaido, Japan, 10–VIII–2001, H. SUGAYA & M. MARUYAMA leg. Paratype, 1♂, Kanayama, Makoi, Shari-chô, Hokkaido, Japan, 28–V–2000, S. KAWAHARA leg. Both the type specimens were collected from nests of *Lasius* (*Chthonolasius*) sp. The holotype is deposited in the National Science Museum, Tokyo (NSMT).

Type locality. Sapporo-shi, Hokkaido, Japan.

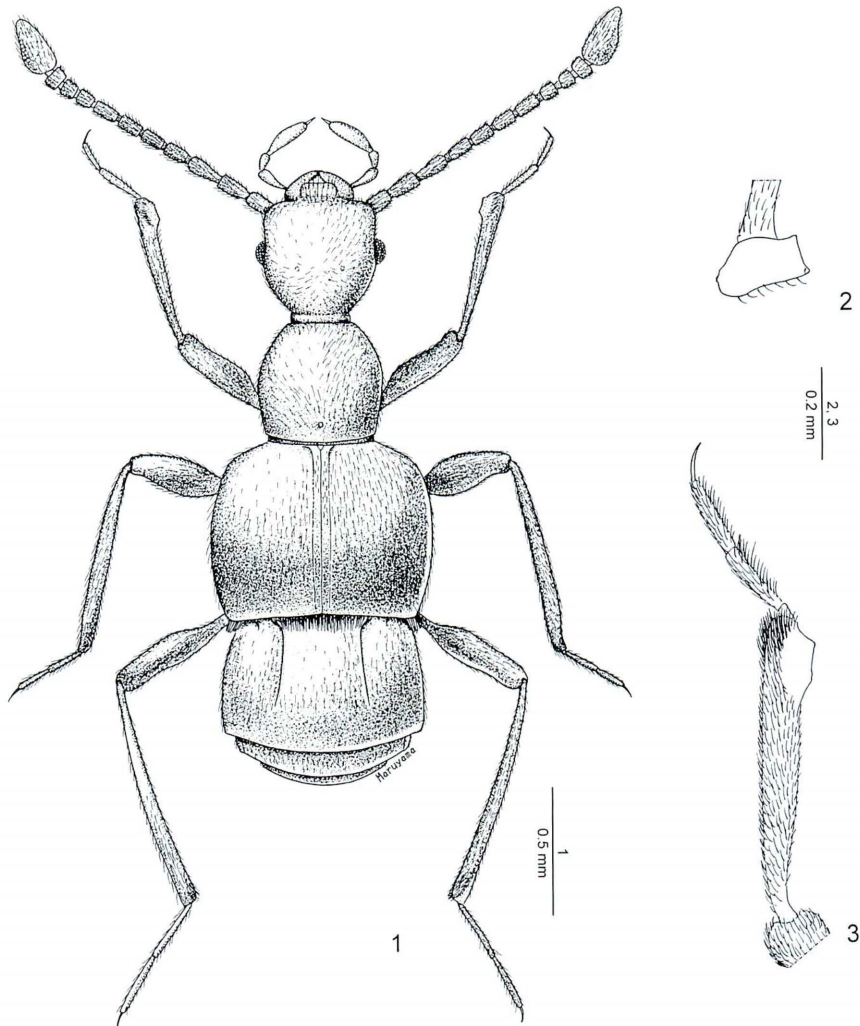
Symbiotic host. *Lasius* (*Chthonolasius*) sp./spp.: *L. umbratus* (NYLANDER, 1846) or *L. meridionalis* (BONDROIT, 1920), which are almost indistinguishable based on worker material. Only worker materials were available.

Etymology. Dedicated to Mr. Susumu KAWAHARA, a collector of the type series.

Diagnosis. This species is closely similar in general appearance to *Batraxis macedonica* (KARAMAN, 1967) described from Macedonia, but distinguished from it by the absence of transverse sulcus on the frons and basal discal foveae on the elytra, the longer discal carinae on the tergite IV, and the shape of the aedeagus.

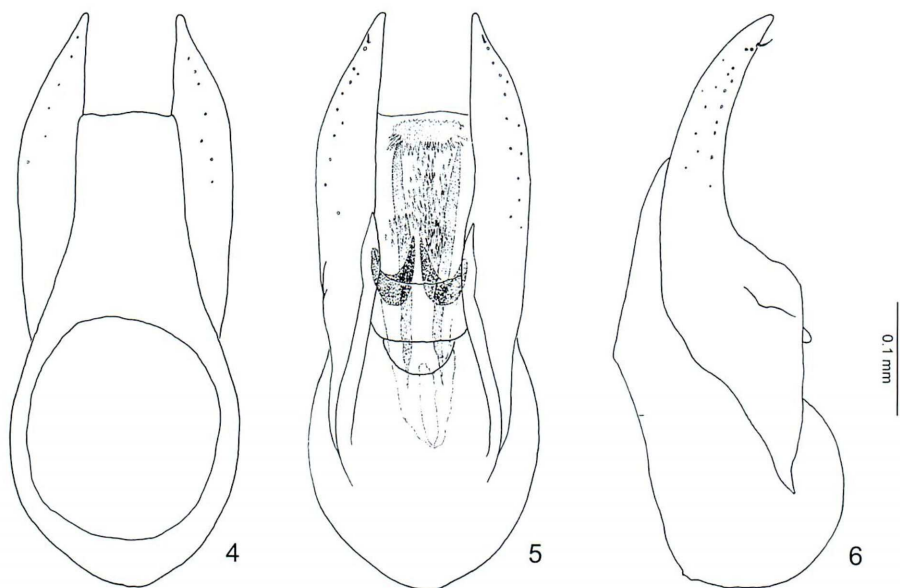
Batraxis splendida is confined to the Nansei-shotô (the Ryukyu Archipelago) in Japan, and most probably its distribution does not overlap that of *B. kawaharai*. They are easily distinguished by body size and shape (see NOMURA, 1986).

Description. Male. Pale reddish brown; mouthparts and tarsi paler. Head (Fig. 1) slightly longer than wide (ratio ca. 1.15) as long as wide, subparallel-sided in anterior half; frons flattened, almost truncated anteriorly; vertex gently convex, with inconspicuous vertexal foveae; dorsal surface densely covered with long recumbent setae, except for clypeus with thicker suberect setae; eyes ovoidal, higher than long, each composed of about 35 facets. Antennae long and slender, densely covered with setae; antennomeres I–VII each longer than wide; antennomere VIII as long as wide; antennomeres IX and X each wider than long; antennomere XI the largest, ovate; relative lengths of antennomeres from basal to apical:—6:5:5:5:5:5:6:4.5:4:3.5:12. Maxillary palpi slender; with palpomere II gently curved, much dilated apicad; palpomere III short, curved near base, one-third as long as II; palpomere IV fusiform, four times as long as wide, almost as long as II, widest at basal two-fifths; palpal spine small, one-fifth as long as IV.



Figs. 1–3. *Batraxis kawaharai* sp. nov. — 1, Habitus; 2, male trochanter, left dorsal view; 3, male fore tibia and tarsus, left, dorsal view. Figures are based on holotype.

Pronotum slightly wider than head (ratio ca. 1.08), almost as long as wide (ratio ca. 1.04), widest around middle or anterior three-sevenths, with a relatively conspicuous median antebasal fovea, and at the same level with lateral antebasal foveae, which are hardly recognised; dorsal surface densely covered with long recumbent setae. Elytra well convex, wider than long (ratio ca. 1.25), widest at middle, with a pair of shallow basal foveae, devoid of discal foveae, and with sutural striae deep and obvious; surface densely covered with long recumbent setae. Legs long, densely covered with setae; fore trochanter (Fig. 2) flume-shaped, truncated apically in dorsal view; fore



Figs. 4–6. *Batraxis kawaharai* sp. nov. — 4, Aedeagus, dorsal view; 5, ditto, ventral view; 6, ditto, lateral view. Figures are based on holotype.

tibia (Fig. 3) with a subtrapezoidal projection near apex, and its dorsal surface glabrous.

Abdomen narrower than elytra (ratio ca. 0.91), longer than wide (ratio ca. 1.18), moderately covered with long recumbent setae; tergite IV large, slightly convex, completely fused with paratergites and sternite; mediobasal foveae shallow, inconspicuous; discal carinae long, four-fifths as long as tergite IV; basolateral foveae small and poorly recognised; trichomes long, dense, located between bases of discal carinae, almost uniform in length; sternite IV with trichomes along basal margin; segments V–VIII deflected, short. Aedeagus (Figs. 4–6) large, ovate; internal sac with a pair of U-shaped sclerites and a pair of longitudinal bands, covered with pinules at inner side; parameres gently narrowed apicad from middle in dorsal and ventral views, curved ventrad in lateral view.

Female unknown.

Measurements. Body length: ca. 2.60–2.63 mm; head length (excl. neck): 0.55–0.56 mm; head width: 0.48–0.49 mm; antennal length: 1.28–1.30 mm; pronotal length: 0.50–0.51 mm; pronotal width: 0.52–0.53 mm; elytral length: 0.75–0.77 mm; elytral width: 0.93–0.95 mm; abdominal length: 1.00–1.02 mm; abdominal width: 0.85–0.87 mm; foretibial length: 0.65–0.66 mm; midtibial length: 0.85–0.87 mm; hindtibial length: 1.04–1.07 mm.

Bionomics and collecting notes. Mr. S. KAWAHARA collected a specimen of this species in a nest of *Chthonolasius* ants. The ants nested at the base of a dead standing

tree, and the nest was exposed due to fall of the tree caused by a storm.

In the evening of 10th August, 2001, we collected a specimen above ground near a nest of *Chthonolasius* ants, which was covered with numerous workers and sexual forms; it was just the time of their nuptial flights.

Ordinarily, collecting inquiline insects of *Chthonolasius* ants is difficult because of subterranean habitat of the ants. The latter example may be a good collecting method for inquilines of *Chthonolasius* ants, though the collecting season is strictly limited.

Acknowledgments

We thank Mr. Yasunari KIDA (Maruseppu Insectarium, Maruseppu-chô, Hokkaido) and Mr. Susumu KAWAHARA (Koshimizu-chô, Hokkaido) for providing us the material. Thanks are also due to Dr. Shun-Ichi UENO and Dr. Shûhei NOMURA (NSMT) for reviewing the manuscript and valuable comments.

This study is supported by a grant from the Research Fellowship of the Japan Society for the Promotion of Science for Young Scientists (Postdoctoral Fellow) to MARUYAMA.

要 約

丸山宗利・菅谷 洋：ケアリ属アメイロケアリ亜属の1種と共生するアトキリアリヅカムシ属の北海道産1新種。—— *Batraxis kawaharai* sp. nov. キタアトキリアリヅカムシ（和名新称）を、北海道でケアリ属アメイロケアリ亜属の1種の巣より採集された個体をもとに記載した。本種はバルカン半島より記載された *B. macedonica* (KARAMAN) に酷似するが、いくつかの形質状態により区別できる。

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